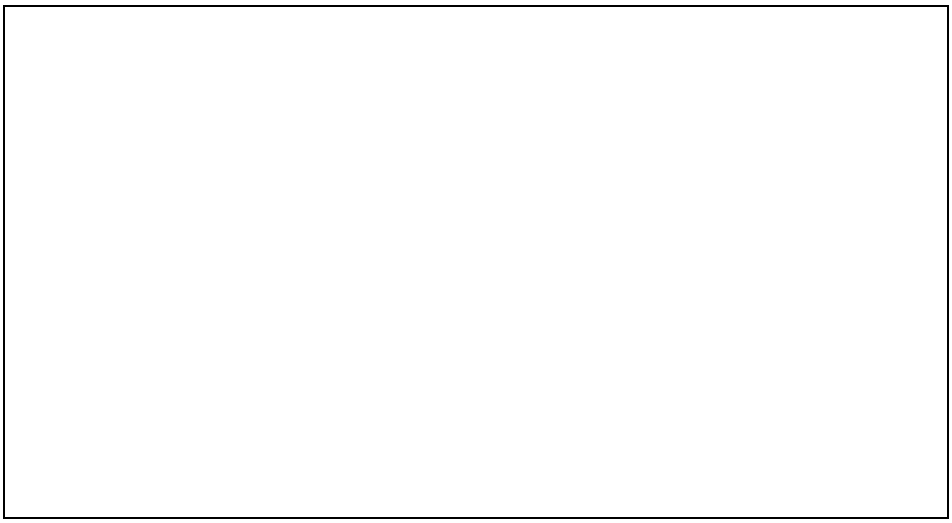
# 48PGD/E/F/K/L/M20-28
# 50PG20-28

## SINGLE-PACKAGE COOLING UNITS WITH FACTORY-INSTALLED GAS HEAT

## SINGLE-PACKAGE COOLING UNITS WITH OPTIONAL ELECTRIC HEAT

— PERFORMANCE DATA
— CERTIFIED DIMENSION PRINTS
— ROOF CURB DIMENSION PRINT



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Form 48/50PG-3SB Supersedes: New Printed in U.S.A. 10-04 Catalog No. 514-80020

| Date: | Supersedes: | **48/50PG20-028 SINGLE-PACKAGE COOLING UNIT WITH GAS HEAT AND COOLING UNIT WITH OPTIONAL ELECTRIC HEAT** | 48/50PG | Rev.: -3SB |
|---|---|---|---|---|
| JOB NAME: | | LOCATION: | | |
| BUYER: | | BUYER P.O. # | CARRIER # | |
| UNIT NUMBER: | | MODEL NUMBER: | | |
| PERFORMANCE DATA CERTIFIED BY: | | | DATE: | |

ARI STANDARD 210

## DESCRIPTION

All units are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant at the factory. 48PG units are one-piece ultra-high efficiency rooftop cooling units with gas heat. 50PG units are one-piece ultra-high efficiency cooling units with optional electric heat. Units are factory tested in both heating and cooling modes. The unit is rated in accordance with ARI Standard 360, tested in accordance with UL Standard 1995 and listed by UL and UL, Canada.

The 48PGD model is low heat, the 48PGE is medium heat, and the 48PGF model is high heat. The 48PGL model is low heat with stainless steel heat exchangers, the 48PGM is medium heat with stainless steel heat exchangers, and the 48PGN model is high heat with stainless steel heat exchangers. The 48/50PG is available in vertical airflow or horizontal airflow models.

## STANDARD UNIT — FEATURES

- Puron (R-410A) HFC refrigerant
- EERs up to 11.6 and IPLVs up to 12.9
- Sound levels as low as 82 dB
- Scroll compressors internally protected with crankcase heaters and economizer heat exchanger
- Independent two-stage cooling capacity control
- Thermal Expansion Valve refrigerant control with removable power element
- Hinged access doors with quarter-turn latches, and tiebacks
- Slide-out blower/motor assembly
- Internally sloped condensate pan with clean out access door
- Slide-out filter tracks with standard 2-in. filters
- Electrical power thru-the-bottom or thru-the-curb connections
- Major access doors have double wall construction
- Cleanable foil-faced insulation throughout the entire unit airstream
- Convertible duct connections from vertical to horizontal airflow
- Totally enclosed, thermally protected, shaft down condenser motors
- Solid core liquid line filter drier
- Isolated and insulated compressor compartment
- Belt drive fan and motor assembly
- Copper tube aluminum fin coils
- Wiring is colored and labeled throughout the unit
- Heavy gage full perimeter base rails with built-in rigging capabilities
- Cooling operation up to 125 F (52 C) ambient
- Cleanable evaporator and condenser coils
- Refrigerant access valves that allow system readings without creating air bypass
- Compressor protection includes high, low pressure cutouts and over temperature protection
- 24-volt control system with resettable circuit breaker
- One-year product warranty.
- Five-year warranty on all compressors

## STANDARD UNIT — FEATURES (48PG)

- Up to 82% efficiency
- Induced draft combustion system used for reliability and safety.
- Reliable IGC (integrated gas unit controller) provides system evaluation and troubleshooting via onboard LED indicator.
- Direct Spark Ignition.
- Alumagard™ coated Turbo-tubular™ Heat Exchangers.
- Two-stage capacity control
- Single point gas connection
- Ten-year warranty on Alumagard coated Turbo-tubular gas heat exchanger.
- Fifteen-year warranty on optional stainless steel heat exchanger.

## STANDARD UNIT — FEATURES (50PG)

- Five-year warranty on electric heaters.
- Electric heaters available as factory-installed option or field-installed accessory.
- Heavy-duty nickel chromium element with high limit reset.

## *COMFORT*LINK™ CONTROLS — FEATURES

Features with optional *Comfort*Link™ controls:

- Communications (via stand-alone thermostat or CCN)
- Scrolling Marquee Display
- Time Schedule
- Reverse Rotation Protection for Compressors
- Space Temperature Sensor capability
- Service Diagnostics, alarms, and alarm history
- Service Run Test capability
- Unit run time and compressor cycles history
- $CO_2$ sensor capability
- 0° F (–18 C) ambient cooling operation.

## PERFORMANCE DATA

Unit Operating Weight _____ lb

Curb Weight _____ lb

**COOLING**

Gross Total Capacity _____ Btuh
at Condenser Air Temperature _____ F
Gross Sensible Capacity _____ Btuh
Compressor Power Input _____ kW
Indoor Entering db _____ F wb _____ F
Airflow _____ External Static Pressure _____ in. wg
Indoor Fan Motor Size _____ Hp
Exhaust Fan Motor Size _____ Hp

**HEATING**

Heating Capacity:
Stage 1 _____ Btuh
Stage 2 _____ Btuh
Heating Capacity Total _____ Btuh
Stage 1 _____ kW
Stage 2 _____ kW

## ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hz
Minimum Circuit Amps _____ Maximum Overcurrent Protection _____

## SUBMITTAL DATA

Job Name _____

Architect _____

Engineer _____

Contractor _____

Unit Designation _____

## OPTIONS AND ACCESSORIES

### FACTORY-INSTALLED AND CERTIFIED OPTIONS

- ☐ Intelligent *Comfor*tLink™ Controls
- ☐ Electro-Mechanical Controls
- ☐ Economizer with Single Dry Bulb Sensor
- ☐ Economizer with Single Enthalpy Sensor
- ☐ Powered 115-volt Convenience Outlet
- ☐ Non-Powered 115-volt Convenience Outlet
- ☐ HACR Breaker
- ☐ Non-Fused Disconnect Switch
- ☐ Manual Outdoor-Air Damper
- ☐ Two-Position Motorized Outdoor Air Damper
- ☐ Barometric Relief Damper
- ☐ Power Exhaust
- ☐ 4-in. Filter Capabilities
- ☐ Horizontal Duct Configuration
- ☐ Condenser Coil Hail Guards
- ☐ MERV – 8 Pleated Filters
- ☐ $CO_2$ Sensor
- ☐ Return Air and Supply Air Smoke Detectors
- ☐ Fan and Plugged Filter Switch
- ☐ High-Static Performance Motor/Drives
- ☐ Phase Loss Protection
- ☐ Pre-Coated Aluminum Fin/Copper Tube Coils
- ☐ Copper Fin/Copper Tube Coils
- ☐ E-Coated Aluminum Fin/Copper Tube Coils
- ☐ E-Coated Copper Fin/Copper Tube Coils
- ☐ Stainless Steel Gas Heat Exchanger (48PG Only)
- ☐ Low/Medium/High Electric Heaters (50PG Only)
- ☐ Low/Medium/High Gas Heat Sizes (48PG Only)

### FIELD-INSTALLED, PRE-ENGINEERED, CERTIFIED ACCESSORIES

- ☐ Economizer with Single Dry Bulb Sensor
- ☐ Solid-State Enthalpy Control
- ☐ Differential Enthalpy Control
- ☐ Manual Outdoor-Air Damper
- ☐ Two-Position Motorized Outdoor Air Damper
- ☐ Barometric Relief Damper
- ☐ Power Exhaust
- ☐ Condenser Coil Hail Guards
- ☐ Condensate Overflow Switch
- ☐ $CO_2$ Sensor
- ☐ Return Air and Supply Air Smoke Detectors
- ☐ Fan and Plugged Filter Switch
- ☐ Phase Loss Protection
- ☐ Low/Medium/High Electric Heaters (50PG Only)
- ☐ Single Point Electric Heater Kits (50PG Only)
- ☐ Roof Curb (14 in.)
- ☐ Roof Curb (24 in.)
- ☐ Adapter Curbs
- ☐ Burglar Bars
- ☐ Liquid Propane (LP) Gas Conversion Kit (48PG Only)
- ☐ High Altitude Gas Kit (48PG Only)
- ☐ Flue Gas Discharge Deflector (48PG Only)
- ☐ Thermostat and Subbase
- ☐ T-55 Space Temperature Sensor with Override
- ☐ T-55 Space Temperature Sensor and $CO_2$ Sensor with Override
- ☐ T-56 Space Temperature Sensor with Override and Set Point Adjust
- ☐ T-56 Space Temperature Sensor and $CO_2$ Sensor with Override and Set Point Adjust
- ☐ T-58 CCN Communicating Space Temperature Sensor with Override and Set Point Adjust

### OTHER SPECIAL ITEMS

_____

_____

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_____

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CUT ALONG DOTTED LINE CUT ALONG DOTTED LINE

# CERTIFIED DIMENSION PRINT

NOTES:
1. FOR OUTDOOR USE ONLY.
2. WEIGHTS SHOWN ARE FOR 48PG (LOW HEAT) UNIT WITH MANUAL 25% OUTDOOR AIR OPTION, ALUMINUM COILS, AND STANDARD DRIVE. FOR WEIGHTS OF OPTIONAL EQUIPMENT CONSULT PRODUCT DATA BOOK.
3. DO NOT LOCATE ADJACENT UNITS WITH FLUE DISCHARGE FACING ECONOMIZER INLET.
   MIN. CLEARANCES TO BE :
   RIGHT SIDE : 6'-0" [1829] CONDENSER AIR
   LEFT SIDE : 10'-0" [3048] OUTSIDE AIR
   FRONT SIDE : 3'-0" [915] SEVICE
   : 6'-0" [1829] CONDENSER AIR
   : 8'-0" [2438] COIL REMOVAL
   REAR SIDE : 6'-0" [1829] CONDENSER AIR
   : 6'-6" [1981] ECONOMIZER REMOVAL
   TOP : 6'-0 [1829] CONDENSER FAN
   BOTTOM : 1'-2" [356] COMBUSTIBLE SURFACE (W/O CURB)
   FLUE OUTLET: 4'-0" [1219] COMBUSTIBLE SURFACES
   /UTILITY METERS/REGULATORS/RELIEFS
4. FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
5. DOWN SHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. IF UNIT IS MOUNTED SIDE SUPPLY, IT IS RECOMMENDED THE DUCTS MUST BE SUPPORTED BY CROSS BRACES AS DONE ON ACCESSORY ROOF CURB.
6. DIMENSIONS IN [ ] ARE IN MILLIMETERS OR KILOGRAMS.
7. WITH THE EXCEPTION OF CLEARANCE FOR THE CONDENSER COIL AND THE DAMPER/POWER EXHAUST AS STATED IN NOTE #3, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
8. DIMENSIONS ARE FROM OUTSIDE OF BASE RAIL. ALLOW 0- 5/16 [8] ON EACH SIDE FOR TOP COVER DRIP EDGE.

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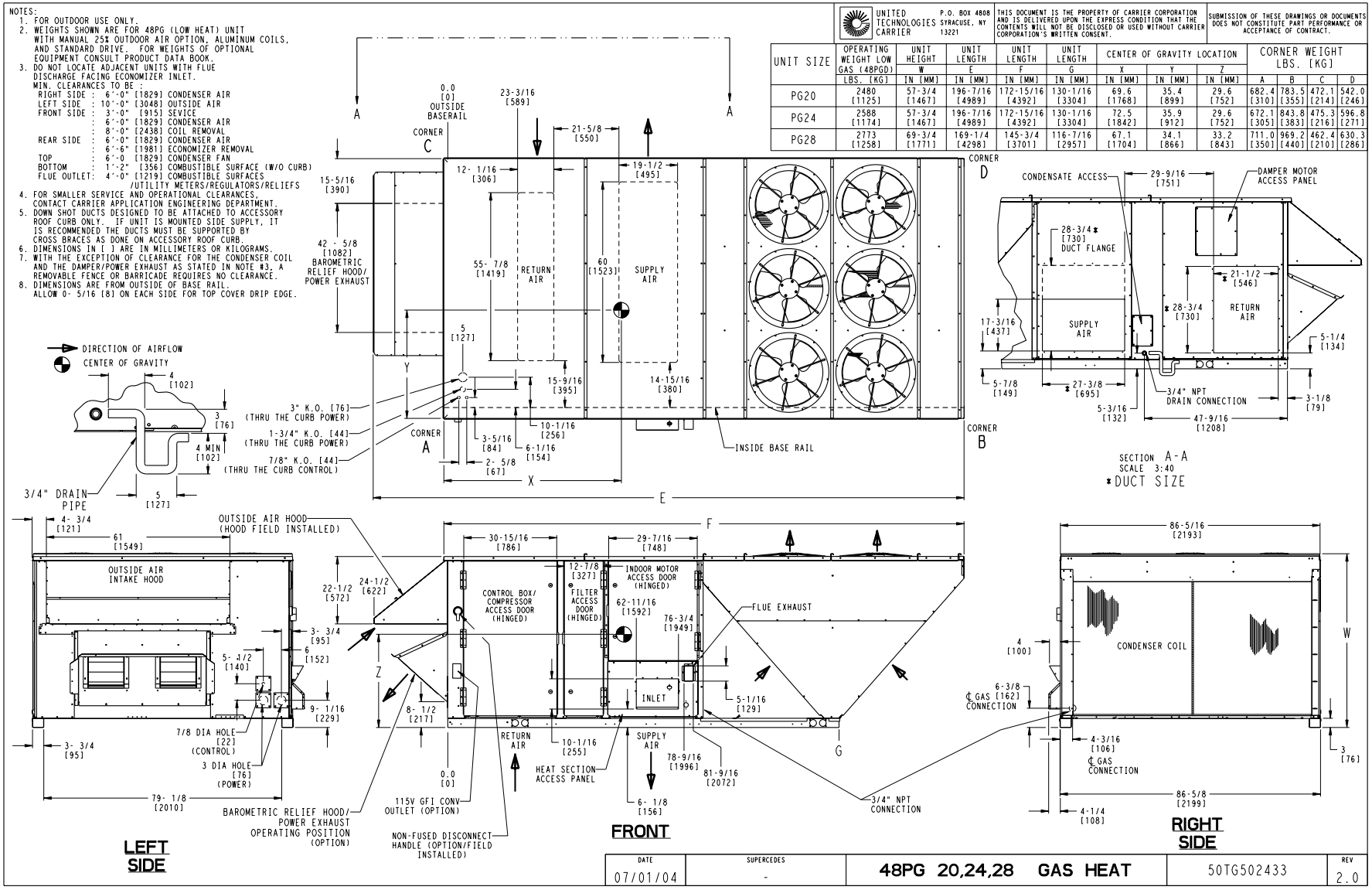
| UNIT SIZE | OPERATING WEIGHT LOW GAS (48PGD) | UNIT HEIGHT | UNIT LENGTH | UNIT LENGTH | UNIT LENGTH | UNIT LENGTH | CENTER OF GRAVITY LOCATION | | | CORNER WEIGHT LBS. [KG] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | W | E | F | G | | X | Y | Z | | | | |
| | LBS. [KG] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | A | B | C | D |
| PG20 | 2480 [1125] | 57-3/4 [1467] | 196-7/16 [4989] | 172-15/16 [4392] | 130-1/16 [3304] | 69.6 [1768] | 35.4 [899] | 29.6 [752] | 682.4 [310] | 783.5 [355] | 472.1 [214] | 542.0 [246] | |
| PG24 | 2588 [1174] | 57-3/4 [1467] | 196-7/16 [4989] | 172-15/16 [4392] | 130-1/16 [3304] | 72.5 [1842] | 35.9 [912] | 29.6 [752] | 672.1 [305] | 843.8 [383] | 475.3 [216] | 596.8 [271] | |
| PG28 | 2773 [1258] | 69-3/4 [1771] | 169-1/4 [4298] | 145-3/4 [3701] | 116-7/16 [2957] | 67.1 [1704] | 34.1 [866] | 33.2 [843] | 711.0 [350] | 969.2 [440] | 462.4 [210] | 630.3 [286] | |




| DATE | SUPERCEDES | 48PG 20,24,28 GAS HEAT | 50TG502433 | REV |
|---|---|---|---|---|
| 07/01/04 | - | | | 2.0 |

# CERTIFIED DIMENSION PRINT

NOTES:
1. FOR OUTDOOR USE ONLY.
2. WEIGHTS SHOWN ARE FOR 50PG COOLING ONLY UNIT WITH MANUAL 25% OUTDOOR AIR OPTION, ALUMINUM COILS, AND STANDARD DRIVE. FOR WEIGHTS OF OPTIONAL EQUIPMENT CONSULT PRODUCT DATA BOOK.
3. MIN. CLEARANCES TO BE :
   RIGHT SIDE : 6'-0" [1829] CONDENSER AIR
   LEFT SIDE : 10'-0" [3048] OUTSIDE AIR
   FRONT SIDE : 3'-0" [915] SERVICE
   : 6'-0" [1829] CONDENSER AIR
   : 8'-0" [2438] COIL REMOVAL
   REAR SIDE : 6'-0" [1829] CONDENSER AIR
   : 6'-6" [1981] ECONOMIZER REMOVAL
   TOP : 6'-0 [1829] CONDENSER FAN
   BOTTOM : 1'-2" [356] COMBUSTIBLE SURFACES (W/O CURB)
4. FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT CARRIER APPLICATION ENGINEERING DEPARTMENT.
5. DOWN SHOT DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. IF UNIT IS MOUNTED SIDE SUPPLY, IT IS RECOMMENDED THE DUCTS MUST BE SUPPORTED BY CROSS BRACES AS DONE ON ACCESSORY ROOF CURB.
6. DIMENSIONS IN [ ] ARE IN MILLIMETERS OR KILOGRAMS.
7. WITH THE EXCEPTION OF CLEARANCE FOR THE CONDENSER COIL AND THE DAMPER/POWER EXHAUST AS STATED IN NOTE #3, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
8. DIMENSIONS ARE FROM OUTSIDE OF BASE RAIL. ALLOW 0- 5/16 [8] ON EACH SIDE FOR TOP COVER DRIP EDGE.
9. A FIELD SUPPLIED 90° ELBOW DUCT MUST BE INSTALLED IN THE SUPPLY DUCTWORK BELOW THE UNIT DISCHARGE CONNECTION.

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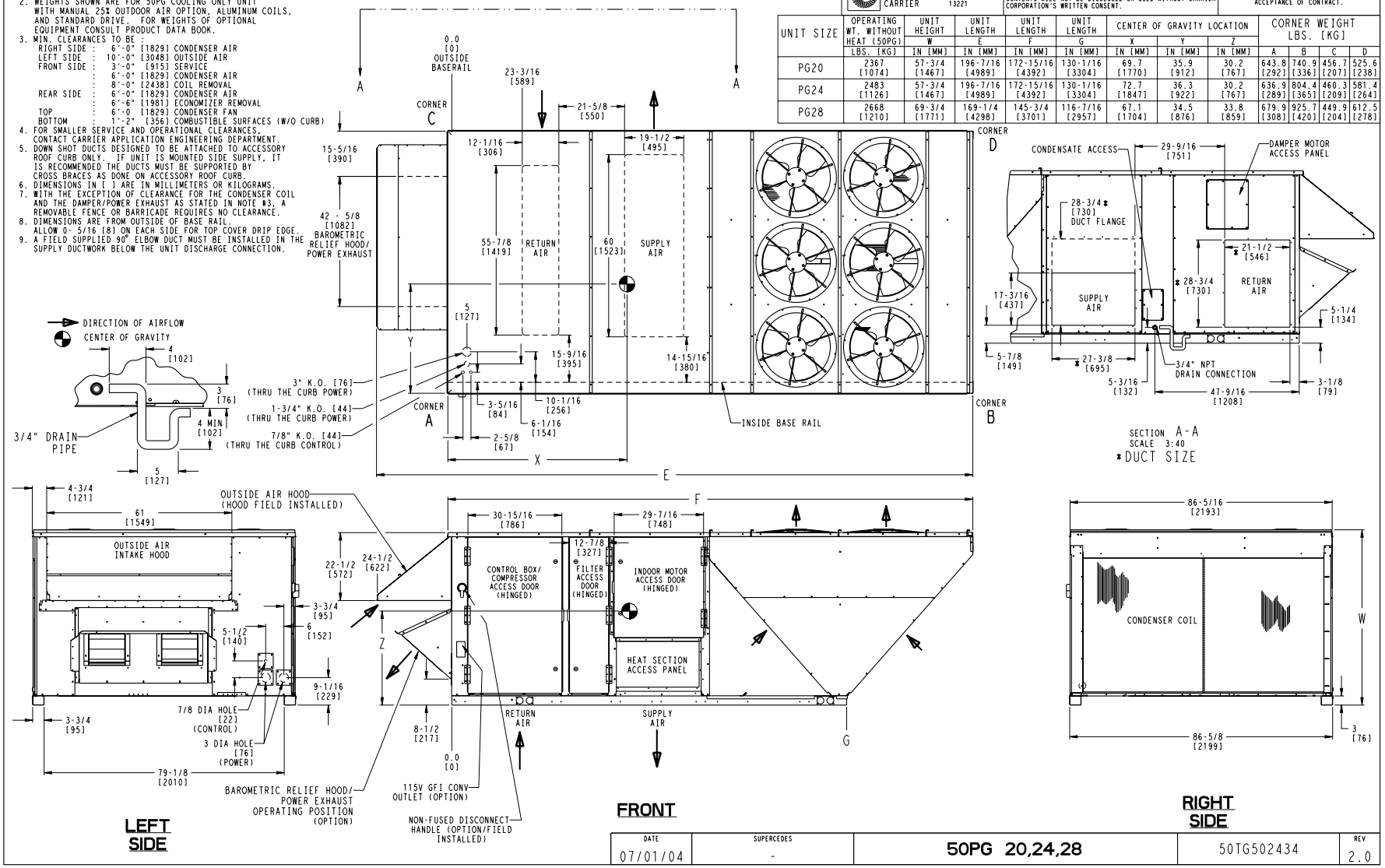
| UNIT SIZE | OPERATING WT. WITHOUT HEAT (50PG) | UNIT HEIGHT | UNIT LENGTH | UNIT LENGTH | UNIT LENGTH | CENTER OF GRAVITY LOCATION | | | CORNER WEIGHT LBS. [KG] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W | E | F | G | X | Y | Z | A | B | C | D |
| | LBS. [KG] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | IN [MM] | | | | |
| PG20 | 2367 [1074] | 57-3/4 [1467] | 196-7/16 [4989] | 172-15/16 [4392] | 130-1/16 [3304] | 69.7 [1770] | 35.9 [912] | 30.2 [767] | 643.8 [292] | 740.9 [336] | 456.7 [207] | 525.6 [238] |
| PG24 | 2483 [1126] | 57-3/4 [1467] | 196-7/16 [4989] | 172-15/16 [4392] | 130-1/16 [3304] | 72.7 [1847] | 36.3 [922] | 30.2 [767] | 636.9 [289] | 804.4 [365] | 460.3 [209] | 581.4 [264] |
| PG28 | 2668 [1210] | 69-3/4 [1771] | 169-1/4 [4298] | 145-3/4 [3701] | 116-7/16 [2957] | 67.1 [1704] | 34.5 [876] | 33.8 [859] | 679.9 [308] | 925.7 [420] | 449.9 [204] | 612.5 [278] |




| DATE | SUPERCEDES | | | REV |
|---|---|---|---|---|
| 07/01/04 | - | 50PG 20,24,28 | 50TG502434 | 2.0 |

CUT ALONG DOTTED LINE CUT ALONG DOTTED LINE

# ROOF CURB DIMENSION PRINT

| ROOFCURB ACCESSORY | CURB HEIGHT | DESCRIPTION | C | D | |
|---|---|---|---|---|---|
| CRRFCURB018C00 | 1'-2" [356] | ROOF CURB 14" HIGH | 3'-1 15/16" [963] | 9'-6 7/16" [2906] | HG 014-028, PG 20-28 HJ 020-028, 551A,581A 210-300 |
| CRRFCURB019C00 | 2'-0" [610] | ROOF CURB 24" HIGH | 3'-1 15/16" [963] | 9'-6 7/16" [2906] | HG 014-028, PG 20-28 HJ 020-028, 551A,581A 210-300 |

NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. DIMENSIONS IN ( ) ARE IN MILLIMETERS.
3. ▨ DIRECTION OF AIRFLOW.
4. ROOF CURB: 16 GA. (VA03-56) STEEL.
5. TO PREVENT THE HAZARD OF STAGNANT WATER BUILD-UP IN THE UNIT DO NOT EXCEED CURB LEVELING TOLERANCES.
6. CLEARANCE BETWEEN UNIT BASE RAIL AND CURB FLANGE IS 1/4-IN. (6 MM) ON EACH SIDE.

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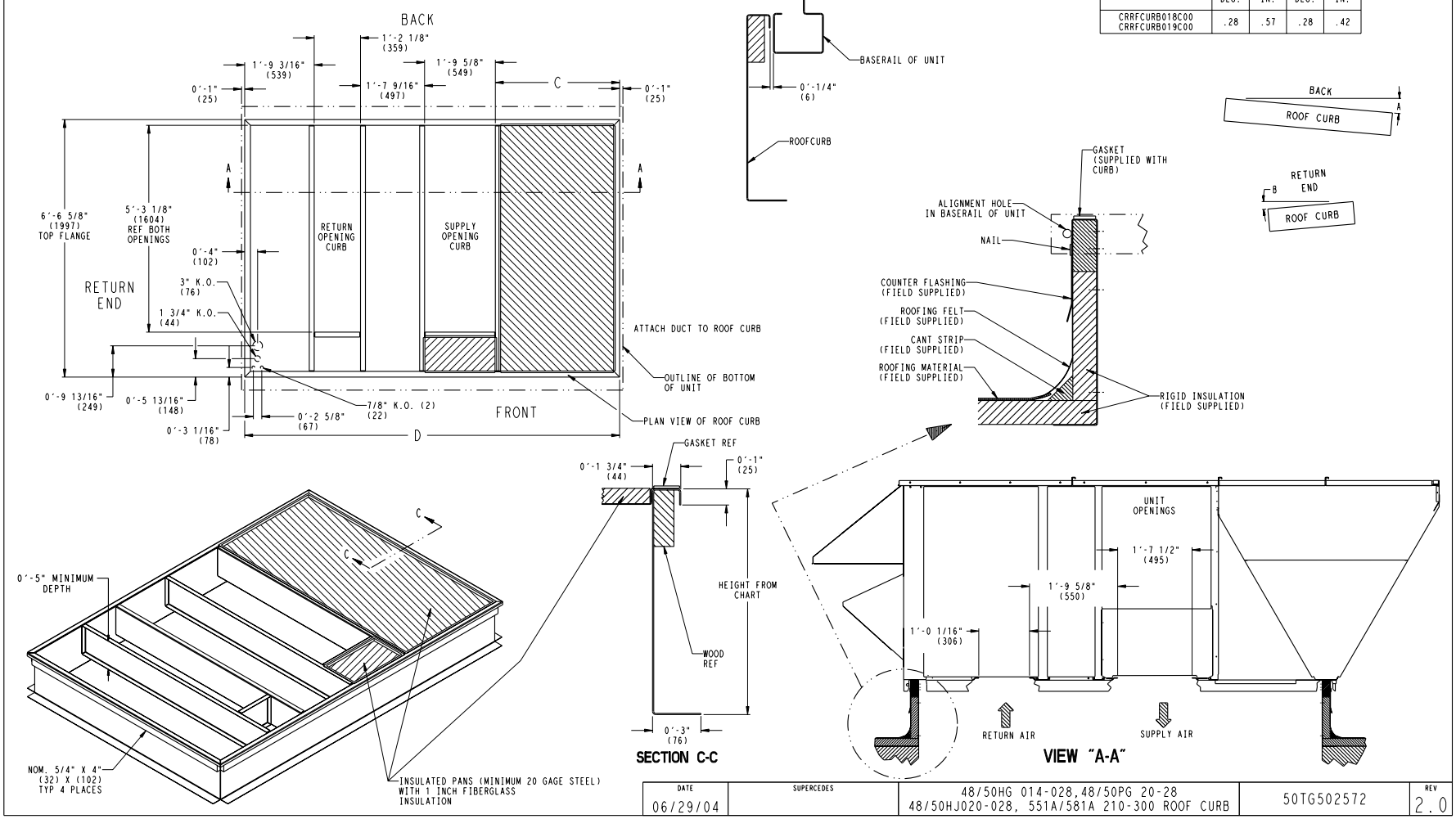
MAX CURB LEVELING TOLERANCES:

| ROOFCURB | A | | B | |
|---|---|---|---|---|
| | DEG. | IN. | DEG. | IN. |
| CRRFCURB018C00 CRRFCURB019C00 | .28 | .57 | .28 | .42 |




| DATE | SUPERCEDES | | |
|---|---|---|---|
| 06/29/04 | | 48/50HG 014-028,48/50PG 20-28 48/50HJ020-028, 551A/581A 210-300 ROOF CURB | 50TG502572 REV 2.0 |